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1 LISTING OF THE CLAIMS

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4 CLAIMS

5 1. (currently amended) A computerized method comprising: executing a nested transaction for
6 computing data in an execution environment supporting a flat transaction only, and wherein a
7 nested transaction encapsulates between a first StartTransaction operation and a corresponding
8 first EndTransaction operation on a first nesting level a hierarchy of one or more further
9 StartTransaction operations and corresponding further EndTransaction operations on further
10 nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an
11 EndTransaction operation ends a transaction; wherein a facade library provides access from an
12 object oriented environment to a relational database system, having a transaction object
13 comprises a depth counter, a CommitTransaction operation, and a RollbackTransaction operation
14 as object methods, and said method further comprising performing a StartTransaction operation
15 by,

16 checking whether said StartTransaction operation is on the first testing level of said
17 nested transaction, and

18 issuing a corresponding StartTransaction operation within said execution environment
19 only if said StartTransaction operation is on the first testing level of said nested transaction in the
20 affirmative case but not otherwise.

21 2. (currently amended) A computerized method for executing a nested transaction for computing
22 data in an execution environment supporting a flat transaction only according to claim 1, said
23 method performing an EndTransaction operation by:

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1 checking, in case said EndTransaction operation is a CommitTransaction operation
2 successfully terminating a transaction, whether said EndTransaction operation is on said first
3 nesting level of said nested transaction, and
4 issuing a corresponding CommitTransaction operation within said execution environment
5 only if said EndTransaction operation is on said first nesting level of said nested transaction in
6 the affirmative case but not otherwise.

7 3. (currently amended) A computerized method for executing a nested transaction for computing
8 data in an execution environment supporting a flat transaction only according to claim 2, said
9 method performing an EndTransaction operation in case said EndTransaction operation is a
10 RollbackTransaction operation aborting a transaction as unsuccessful, by issuing a corresponding
11 RollbackTransaction operation within said execution environment independent from the nesting
12 level of said RollbackTransaction operation.

13 4. (currently amended) A computerized method for executing a nested transaction for computing
14 data in an execution environment supporting a flat transaction only according to claim 3, said
15 method performing, once a RollbackTransaction operation has been executed within said nested
16 transaction, any further StartTransaction operation or any further EndTransaction operation
17 within said nested transaction independent from its nesting level by rejecting it as being in error
18 without issuing a corresponding StartTransaction operation or a corresponding EndTransaction
19 operation to the execution environment.

20 5. (currently amended) A computerized method for executing a nested transaction for computing
21 data in an execution environment supporting a flat transaction only, and wherein a nested
22 transaction encapsulates between a first StartTransaction operation and a corresponding first
23 EndTransaction operation on a first nesting level a hierarchy of one or more further
24 StartTransaction operations and corresponding further EndTransaction operations on further
25 nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an
26 EndTransaction operation ends a transaction; and said method further comprising performing a
27 StartTransaction operation by,

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1 checking whether said StartTransaction operation is on the first testing level of said
2 nested transaction, and
3 issuing a corresponding StartTransaction operation within said execution environment
4 only if said StartTransaction operation is on the first testing level of said nested transaction in the
5 affirmative case but not otherwise;

6 said method performing an EndTransaction
7 operation by:
8 checking, in case said EndTransaction operation is a CommitTransaction operation
9 successfully terminating a transaction, whether said EndTransaction operation is on said first
10 nesting level of said nested transaction, and
11 issuing a corresponding CommitTransaction operation within said execution environment
12 only if said EndTransaction operation is on said first nesting level of said nested transaction in
13 the affirmative case but not otherwise;

14 said method performing an EndTransaction operation in case said EndTransaction operation is a
15 RollbackTransaction operation aborting a transaction as unsuccessful, by issuing a corresponding
16 RollbackTransaction operation within said execution environment independent from the nesting
17 level of said RollbackTransaction operation

18 said method performing, once a RollbackTransaction operation has been executed within said
19 nested transaction, any further StartTransaction operation or any further EndTransaction
20 operation within said nested transaction independent from its nesting level by rejecting it as
21 being in error without issuing a corresponding StartTransaction operation or a corresponding
22 EndTransaction operation to the execution environment; and

23 wherein said method:
24 checks the nesting level of any of said StartTransaction or EndTransaction operations by
25 a depth counter,
26 increments said depth counter in the case of processing a StartTransaction operation, and

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1 decrements said depth counter in the case of processing an EndTransaction operation
2 which is a CommitTransaction operation, and
3 sets said depth counter to zero or an invalid value in the case of processing an
4 EndTransaction operation which is a RollbackTransaction operation.

5 6. (currently amended) A computerized method for executing a nested transaction for computing
6 data in an execution environment supporting a flat transaction only according to ~~claim~~ claim 5,
7 wherein:
8 said method is performed by a facade library separate from said execution environment,
9 and said execution environment is a database system, and
10 said facade library provides access from an object oriented environment to said relational
11 database system.

12 7. (currently amended) A computerized method for executing a nested transaction for computing
13 data in an execution environment supporting a flat transaction only according to claim 6, wherein
14 said facade library comprises a STORE object class providing access to said database system and
15 said STORE object class providing said StartTransaction operation as one of its methods.

16 8. (currently amended) A computerized method for executing a nested transaction for computing
17 data in an execution environment supporting a flat transaction only according to claim 7, said
18 method performing said
19 StartTransaction operation by creating a transaction object for further control of said nested
20 transaction in case said StartTransaction operation is on the first nesting level

21 9. (currently amended) A computerized method for executing a nested transaction for computing
22 data in an execution environment supporting a flat transaction only according to claim 8, wherein
23 said transaction object comprises said depth counter, said CommitTransaction operation, and said
24 RollbackTransaction operation as object methods.

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1 10. (currently amended) A computer implemented system for executing a nested transaction for
2 computing data in an execution environment supporting a flat transaction only, the nested
3 transaction being tangibly embodied in a computer to perform execution of transactions, and
4 wherein a nested transaction encapsulates between a first StartTransaction operation and a
5 corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more
6 further StartTransaction operations and corresponding further EndTransaction operations ends a
7 transaction; said system performing a StartTransaction operation, the system comprising.

8 means for checking whether said StartTransaction operation is on the first nesting level of
9 said nested transaction, and

10 means for issuing a corresponding StartTransaction operation within said execution
11 environment only if said StartTransaction operation is on the first nesting level of said nested
12 transaction in the affirmative case but not otherwise.

13 11. (currently amended) A data processing program for execution in a data processing system
14 comprising software code portions for performing a computerized method for executing a nested
15 transaction for computing data in an execution environment supporting a flat transaction only,
16 and wherein a nested transaction encapsulates between a first StartTransaction operation and a
17 corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more
18 further StartTransaction operations and corresponding further EndTransaction operations on
19 further nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an
20 EndTransaction operation ends a transaction; wherein a facade library provides access from an
21 object oriented environment to a relational database system, having a transaction object
22 comprises a depth counter, a CommitTransaction operation, and a RollbackTransaction operation
23 as object methods, and said method further comprising performing a StartTransaction operation
24 by,

25 checking whether said StartTransaction operation is on the first nesting level of said
26 nested transaction, and

27 issuing a corresponding StartTransaction operation within said execution environment
28 only if said StartTransaction operation is on the first nesting level of said nested transaction in
29 the affirmative case but not otherwise.

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1 12. (currently amended) A computer program product stored on a computer usable medium,
2 comprising computer readable program means for causing a computer to perform a method
3 executing a nested transaction in an execution environment supporting a flat transaction only,
4 and wherein a nested transaction encapsulates between a first StartTransaction operation and a
5 corresponding first EndTransaction operation on a first nesting level a hierarchy of one or more
6 further StartTransaction operations and corresponding further EndTransaction operations on
7 further nesting levels, wherein a StartTransaction operation starts a transaction; and wherein an
8 EndTransaction operation ends a transaction; wherein a facade library provides access from an
9 object oriented environment to a relational database system, having a transaction object
10 comprises a depth counter, a CommitTransaction operation, and a RollbackTransaction operation
11 as object methods, and said method further comprising performing a StartTransaction operation
12 by,

13 checking whether said StartTransaction operation is on the first nesting level of said
14 nested transaction,

15 and issuing a corresponding StartTransaction operation within said execution
16 environment only if said StartTransaction operation is on the first nesting level of said nested
17 transaction in the affirmative case but not otherwise.

18 13. (currently amended) An article of manufacture comprising a computer usable medium having
19 computer readable program code means embodied therein for causing execution of a nested
20 transaction for computing data in an execution environment supporting a flat transaction only,
21 the computer readable program code means in said article of manufacture comprising computer
22 readable program code means for causing a computer to effect the steps of claim 1.

23 14. (previously presented) A program storage device readable by machine, tangibly embodying a
24 program of instructions executable by the machine to perform method steps for, said method
25 steps comprising the steps of claim 1.

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1 15. (currently amended) An article of manufacture comprising a computer usable medium having
2 computer readable program code means embodied therein for causing execution of a nested
3 transaction for computing data in an execution environment supporting a flat transaction only,
4 the computer readable program code means in said article of manufacture comprising computer
5 readable program code means for causing a computer to effect the steps of claim 5.

6 16. (previously presented) A program storage device readable by machine, tangibly embodying a
7 program of instructions executable by the machine to perform method steps for, said method
8 steps comprising the steps of claim 5.

9 17. (currently amended) A computer program product comprising a computer usable medium
10 having computer readable program code means embodied therein for causing a executing a
11 nested transaction for computing data in an execution environment supporting a flat transaction
12 only, the computer readable program code means in said computer program product comprising
13 computer readable program code means for causing a computer to effect the functions of claim
14 10.

15 18. (New) A computerized method for executing a nested transaction in an execution
16 environment supporting a flat transaction only according to claim 1, said method performing an
17 EndTransaction operation for computing data by:
18 checking, in case said EndTransaction operation is a CommitTransaction operation
19 successfully terminating a transaction, whether said EndTransaction operation is on said first
20 nesting level of said nested transaction, and
21 issuing a corresponding CommitTransaction operation within said execution environment
22 only if said EndTransaction operation is on said first nesting level of said nested transaction;
23 said method performing an EndTransaction operation in case said EndTransaction operation is a
24 RollbackTransaction operation aborting a transaction as unsuccessful, by issuing a corresponding
25 RollbackTransaction operation within said execution environment independent from the nesting
26 level of said RollbackTransaction operation; and

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1 said method performing, once a RollbackTransaction operation has been executed within said
2 nested transaction, any further StartTransaction operation or any further EndTransaction
3 operation within said nested transaction independent from its nesting level by rejecting it as
4 being in error without issuing a corresponding StartTransaction operation or a corresponding
5 EndTransaction operation to the execution environment.

6 19. (New) An article of manufacture comprising a computer usable medium having computer
7 readable program code means embodied therein for causing execution of a nested transaction for
8 computing data in an execution environment supporting a flat transaction only, the computer
9 readable program code means in said article of manufacture comprising computer readable
10 program code means for causing a computer to effect the steps of claim 18.

11 20. (New) A computerized method for executing a nested transaction in an execution
12 environment supporting a flat transaction only according to claim 5, wherein:
13 said method is performed by a facade library separate from said execution environment,
14 and said execution environment is a database system, and
15 said facade library provides access from an object oriented environment to said relational
16 database system;
17 said facade library comprises a STORE object class providing access to said database
18 system and said STORE object class providing said StartTransaction operation as one of its
19 methods;
20 said method performing said StartTransaction operation by creating a transaction object
21 for further control of said nested transaction in case said StartTransaction operation is on the first
22 nesting level; and
23 said transaction object comprises said depth counter, said CommitTransaction operation,
24 and said RollbackTransaction operation as object methods.

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